

CLAIMS

1. A radially symmetrical optoelectric module comprising:

a symmetrical ferrule defining an axial opening extending along an optical axis and having first and second ends positioned along the optical axis, the ferrule being formed radially symmetrical about the optical axis;

a lens assembly engaged in the ferrule along the optical axis;

the first end of the ferrule being formed to receive an optical fiber such that an end of the optical fiber is positioned along the optical axis and adjacent the lens assembly and light passing through the optical fiber is acted upon by the lens assembly; and

an optoelectric device affixed to the second end of the ferrule so that light traveling along the optical axis appears at the optoelectric device.

2. A radially symmetrical optoelectric module as claimed in claim 1 further including a sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

3. A radially symmetrical optoelectric module as claimed in claim 2 wherein the sleeve is formed of resilient material.

4. A radially symmetrical optoelectric module as claimed in claim 3 wherein the sleeve is frictionally engaged over the outer periphery of the ferrule.

5. A radially symmetrical optoelectric module as claimed in claim 4 wherein the sleeve and the ferrule each include projections for limiting relative axial movement therebetween.

6. A radially symmetrical optoelectric module as claimed in claim 1 wherein the ferrule is formed of electrically conductive material.

7. A radially symmetrical optoelectric module as claimed in claim 6 further including an electrically conductive sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

8. A radially symmetrical optoelectric module as claimed in claim 1 wherein the ferrule and lens assembly form a first structural component and the optoelectric device is mounted in a second structural component.

9. A radially symmetrical optoelectric module as claimed in claim 8 wherein the first structural component includes a first lens of a two lens system and the second structural component includes a second lens of the two lens system, the first and second structural components mounting the two lens system along the optical axis.

10. A radially symmetrical optoelectric module comprising:

a receptacle assembly including a symmetrical ferrule and a first lens, the ferrule defining an axial opening extending along an optical axis and having first and second ends positioned along the optical axis, the ferrule being formed radially symmetrical about the optical axis, the first lens being engaged in the ferrule along the optical axis, and the first end of the ferrule being formed to receive an optical fiber such that an end of the optical fiber is positioned along the optical axis and adjacent the first lens with light passing through the optical fiber being acted upon by the first lens; and

an optoelectric package including an optoelectric device and a second lens positioned adjacent the optoelectric device, the second lens being mounted along the optical axis by the optoelectric package, and the optoelectric package being affixed to the second end of the ferrule so that light traveling along the optical axis appears at the optoelectric device and passes through the second lens.

11. A radially symmetrical optoelectric module as claimed in claim 10 further including a sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

12. A radially symmetrical optoelectric module as claimed in claim 11 wherein the sleeve is formed of resilient material.

13. A radially symmetrical optoelectric module as claimed in claim 12 wherein the sleeve is frictionally engaged over the outer periphery of the ferrule.

14. A radially symmetrical optoelectric module as claimed in claim 13 wherein the sleeve and the ferrule each include projections for limiting relative axial movement therebetween.

15. A radially symmetrical optoelectric module as claimed in claim 10 wherein the ferrule is formed of electrically conductive material.

16. A radially symmetrical optoelectric module as claimed in claim 15 further including an electrically conductive sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

17. A radially symmetrical optoelectric module as claimed in claim 10 wherein the receptacle assembly forms a first structural component and the optoelectric package forms a second structural component.

18. A radially symmetrical optoelectric module comprising:

a tubularly shaped ferrule with an axially extending central opening defining an optical axis, the ferrule being radially symmetric about the optical axis, and a first end of the ferrule constructed to receive an end of an optical fiber engaged therein;

a first lens mounted in the ferrule along the optical axis and positioned to be adjacent the end of the optical fiber; and

an optoelectric package including a second lens and an aligned optoelectric device, the optoelectric package being affixed to a second end of the ferrule opposite the first end with the second lens positioned along the optical axis.

19. A radially symmetrical optoelectric module as claimed in claim 18 further including a sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

20. A radially symmetrical optoelectric module as claimed in claim 19 wherein the sleeve is formed of resilient material.

21. A radially symmetrical optoelectric module as claimed in claim 20 wherein the sleeve is frictionally engaged over the outer periphery of the ferrule.

22. A radially symmetrical optoelectric module as claimed in claim 21 wherein the sleeve and the ferrule each include projections for limiting relative axial movement therebetween.

23. A radially symmetrical optoelectric module as claimed in claim 18 wherein the ferrule is formed of electrically conductive material.

24. A radially symmetrical optoelectric module as claimed in claim 23 further including an electrically conductive sleeve engaged over an outer periphery of the ferrule for mounting the ferrule in a housing.

25. A radially symmetrical optoelectric module as claimed in claim 18 wherein the receptacle assembly forms a first structural component and the optoelectric package forms a second structural component.